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Abstract

This study examines the impact of globalization on cross-country inequality and poverty using a panel data set for 65 developing counties, over the period 1970-2008. With separate modelling for poverty and inequality, explicit control for financial intermediation, and comparative analysis for developing countries, the study attempts to provide a deeper understanding of cross country variations in income inequality and poverty.

The major findings of the study are five fold. First, a non-monotonic relationship between income distribution and the level of economic development holds in all samples of countries. Second, both openness to trade and FDI do not have a favourable effect on income distribution in developing countries. Third, high financial liberalization exerts a negative and significant influence on income distribution in developing countries. Fourth, inflation seems to distort income distribution in all sets of countries. Finally, the government emerges as a major player in impacting income distribution in developing countries.

JEL Classification: F21, F41 and J24.

Key Words: Globalization; Poverty; Inequality; FDI; Developing Countries

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1. Introduction

It is widely accepted by economists and policy makers that over a long period of time open economies generate more gains compared to closed ones, and policies which promote openness contribute significantly to economic growth, employment enhancement and poverty eradication. In the short run, however, a move towards openness-trade liberalization can have a deleterious effect on the poorer members of society. Indeed, it is quite possible that successful open regimes, even in the long run, may leave a number of people behind in poverty. Since trade liberalization by its nature implies adjustment, it is likely to have distributional impacts that normally harm poorer actors in the economy.

Trade liberalization, or openness to trade, is now generally considered as economically beneficial because it increases the size of the overall pie available to all members of society. However, recently anti-globalization critics have suggested that openness to trade is in fact socially harmful on several dimensions, among them the issues of poverty, income inequality and unemployment. The nub of this argument is that free trade accentuates, rather than ameliorates, and it intensifies, rather than diminishes, poverty and income inequality in poor countries. In order to understand the impact of trade liberalization on the above-noted development process the literature emphasises two different strands of argumentation: the static and dynamic. First, according to the static argument, the central effect of trade liberalisation on poverty is assumed to come from the effects on real wages of unskilled workers endowed with labour but with no human or financial capital. The natural conjecture following the Stolper-Samuelson (SS) proposition would be that freer trade should help in the reduction of poverty to poorer countries which use their comparative advantage to export labour-intensive goods. A rise in exports based on labour intensive production techniques leads to a rise in the real wage rate of the unskilled worker and this is instrumental in reducing poverty and income inequality. This, in fact, is the central message of Anne Krueger's (1983) findings from a multi-country project on the effects of trade on wages and employment in developing countries. Another approach also suggests that trade is beneficial for poverty reduction in

developing countries because the consumer surplus increases in the wake of more competitive prices in an open economy.

According to the dynamic argument, free trade reduces poverty in two ways: trade increases growth and growth reduces poverty. In regard to the trade promotes growth hypotheses, there are ample precedents. For instance, Dennis Robertson (1940) characterized trade as an "engine of growth." With regard to the growth reduces poverty argument, Adam Smith (1776) suggested that when society is "advancing to the further acquisition . . . the condition of the laboring poor, of the great body of the people, seems to be the happiest."

According to the well-known Kuznets (1955) inverted-U hypothesis, income inequality increases during the early stages of economic development and, after reaching a turning point, declines. Although, the Kuznets curve exhibits a negative relationship between economic growth and inequality in the long run, poverty is still a long standing problem in the world despite many growth episodes. However, the literature is not conclusive in establishing a relationship between economic growth and income inequality and so it is difficult to say whether growth is good or bad for the poor and whether, in fact, the Kuznets curve holds? For this reason, the relationship between economic growth and income inequality is a key concern in discussions of development policy.

Theoretically speaking, the impact of globalisation on inequality, both within and across countries, is ambiguous and depends on the circumstances of individual countries as well as on the aspect of globalisation involved (O'Rourke, 2001). Different theories have been put forward to analyse the effect of globalisation on inequality, which can be grouped into three categories (Wade, 2001): neoclassical growth theory, endogenous growth theory, and the dependency theory of sociologists. Neo-classical growth theory expects income convergence across countries in the long run due to increased international mobility of capital. In contrast, endogenous growth theory predicts less convergence and, more likely, divergence, as increasing returns to technological innovation offset the diminishing returns to capital. Finally, the dependency theory suggests that developing countries reap lesser rewards from economic integration as they have relatively limited access to international markets and a narrow export base; hence, globalisation does not lead to absolute convergence.

In the presence of such diversified theoretical predictions, estimating the actual impact of globalisation on inequality and poverty remains largely an empirical issue. The available evidence, however, does not produce a consensus and the effect of globalization on inequality and poverty remains ambiguous. Also, no previous study has tried to quantify the relative contributions of globalisation and other fundamental variables on inequality and poverty in developing countries. Clearly, from the national and international policy perspectives, it is imperative to explore both the nature and the importance of various factors in generating the inequality and poverty. In this study we attempt to fill the gaps in the existing literature and lend a fresh perspective to the globalization, inequality and poverty debate. We address five key issues: (1) Does economic growth benefit different economic actors equally or does it comes at the cost of increased inequality leaving some in society poorer?; (2) Is the effect perhaps different over the path of development in the long run?; (3) Does high financial intermediation reduce poverty and inequality?; (4) Does openness have spillover benefits which are shared equally?; (5) What is the role of government in the process - does government spending reduce potentially existing inequalities and poverty?

The remainder of the paper is structured as follows. Section 2 provides a review of related literature and theory on the predictors of inequality and poverty. Section 3 presents an analytical frame work for our empirical study and section 4 provides a discussion of data and estimation procedures, while in section 5 we present our empirical findings. Section 6 is our concluding section.

2. Literature Review

According to the Heckscher-Ohlin (HO) model, a greater degree of openness to trade leads to high relative demand of those factors of production where a country has comparative advantage. In the case of developing countries, low skilled labour abundant countries, demand for unskilled labour increases, thereby the wage differential decreases. However, both the HO model and the SS theorem assume that technologies are identical across countries. If this assumption is dropped then the final effect of openness to trade on wage differentials also depends on the technology diffusion from the developed world to the developing world. This technology transfer is normally skill biased and generates a

skill premium, thereby leading to more unequal distribution of wages (see, for example, Berman et. al., 1994; Author et. al., 1998).

In the literature, it is argued that when developing countries embark on trade liberalisation policies, a substantial up-grading of technology also occurs through the two main channels of exports and imports. A rise in imports allows a developing country to implement embodied technological change through the imports of mature machines, including second hand capital goods (see, for example, Barba et. al., 2002). Furthermore, Perkins and Neumayer (2005) point out that a developing country that is regarded as a laggard enjoys the benefit of last comer by directly accessing relatively new technology.

Trade openness leads to technical up-grading by allowing a rise in the international flows of capital goods (Acemoglu, 2003). Technological up-grading is defined as "skill enhancing trade hypotheses" by (Robbins, 1996, 2003). These authors point out that when the south rapidly adopted the modern skill intensive technologies, resulting high demand for labour widened the existing wage income dispersion in developing countries.

Similarly, a rise in exports induces/forces a developing country to replace outdated technologies for better access in the markets of developed countries. Yeaple (2005) shows that the adoption of new technologies by exporting guarantees more profits and thereby a firms demand for skilled labour. Hanson and Harrison (1999) also provide evidence on the inequality enhancing role of exports by documenting a case study of Mexico where firms in the exporting sector employ a higher share of white-collar workers as compared to non exporting plants. Furthermore, Berman and Machine (2000, 2004) find evidence for an increased demand for skill in developing countries. Conte and Vivarelli (2007) also provide similar evidence for developing countries. These models provide evidence for skilled labour demand in the wake of increased imports of capital goods but do not link it directly to income inequality and poverty. This is a gap which we attempt to address in this study.

The effects of globalization on poverty in developing countries has recently become a key concern and a policy issue for economists and practitioners. More than one sixth of the worlds population live under the poverty line of $1 a day, half of the developing countries live on less than $2 a day (Harrison et al.,). These poverty facts in

the developing world occur at the same time as most of the developing countries have embarked on liberalized trade policy and are becoming integrated into the world economy. For example, Greenway et al., (2002) demonstrate that during 1980-2000 more than 100 developing countries have undertaken trade liberalization reforms. Keeping in view these facts, it is easy to understand why critics of globalization blame most of the woes of globalization on trade liberalization.

Carneiro and Arbache (2003) use a computable general equilibrium model to simulate different trade liberalization policy scenarios and counterfactual micro simulations to assess the impacts of greater trade openness on household income distribution and the poverty ratio. They conclude for Brazil that trade liberalization alone may not be sufficient to significantly reduce poverty and inequality. Gibson (2000**)** analyses the changes in poverty in Papua New Guinea during the 1990s adjustment programme. Data from urban household surveys in 1986 and 1996 are used to calculate the change in the incidence, depth and severity of poverty. They find that there was a rise in both the depth and severity of poverty in the 1990s, with the major contributor being growth in inequality.

How does globalization impact on poverty? Does globalization benefit poor people in the developing world? Will on going efforts to eliminate further trade barriers improve the welfare of the poor people in the world? Surprisingly, little attention has been paid to these important questions. Winters et al (2004), Goldberg and Povcnick (2004, 2006), and Ravallion (2004) review the recent evidence. All of these studies acknowledge that one can only review the indirect evidence on the theme of globalization and poverty linkages and there is hardly any study which tests for the direct linkage between globalization and poverty.[‡] According to the "orthodox" perspective on openness to trade and poverty, with reference to writings of Anne Krueger and David Dollar and others, trade liberalization is good for growth and growth is good for the poor. Globalization critics point out that openness to trade is associated with increasing income inequalities that push poor people further behind. David Dollar and Anne Krueger argue

[‡] Winters et al (2004) point out in their comprehensive and significant survey that "there are no direct studies of the poverty effects of trade and trade liberalization". Goldberg and Povcnick (2004, 2006) write in their excellent review "while the literature on trade and inequality is voluminous, there is no work to date on the relationship between trade liberalization and poverty".

that globalization is inversely associated with income inequalities in poor countries because these countries specialize in the production of those goods that use unskilled labour. However, the recent literature has provided evidence that orthodox views on the linkages between globalization and poverty are not valid.

2.1: Theory of Inequality and Poverty Determinants

In this section we analyze the factors that explain variations in cross country income inequalities and poverty. The most important factor that explains cross country income inequality is economic growth. The Kuznets Curve suggests an inverse U-shaped relationship between economic growth and income inequality that implies at an early stage of economic development economic growth increase inequalities and eventually decrease them at a later stage of development due to the trickle down effects of economic growth. However, this relationship does not appear to be stable and it varies with a change in methodology, sample size and conditioning variables. Paukerit (1973) and Ahluwalia (1976) support the Kuznet's point of view. But some later studies (Deininger and Squire, 1998; Ravallian, 1995) do not find economic growth affecting income distribution.

The theoretical literature provides different hypotheses concerning financial development and income inequality. For example, some studies (Banerjee and Newman, 1993; Galor and Zeira, 1993; Aghion and Bolton, 1997) claim that financial intermediary development is pro-poor, thereby decreasing inequality. Lamoreaux (1986), Haber (1991), Maurer and Haber (2003), on the other hand, argued that at an early stage of financial deepening access to financial services is limited to incumbents and will thus raise their income relevant to the income of the poor. Other models (Greenwood and Jovnovie, 1990), posit a non-linear inverted U-shaped relationship between financial development and income distribution.

Inflation may have a strong redistributive effect which could be positive (through its effects on individual income wealth) or negative (through a progressive tax system). Inflation hurts the poorest segment of society because it causes the worsening of existing income inequalities in the economy as money transfers from the poor to the rich and it becomes harder to meet life's necessities and people are trapped in a vicious circle of poverty. The negative effects of inflation on the poor are intensified when wages fail to

chase increasing price levels. In developing countries, trade unions are weak and minimum wage laws do not work properly, due to weak institutions, and workers are left with less or no rise in wages, while firms enjoy the benefits of rising prices and get richer.

Government consumption is also one of the factors that affect income inequality; income inequality may increase or decrease with government consumption. For example, if most of the redistribution through the tax and transfer system is towards the poor, government consumption might result in greater inequality. However, it could have the opposite effects if government consumption is not developmental (i.e. not pro-poor). Cross country studies (Stock, 1978; Boyd, 1988), find the size of the public sector to be significant in reducing income inequality.

Differences in population growth across countries is another factor explaining inter-country variation in income inequality. Although population growth generally declines as per capita income rises, there is considerable variation in the population growth rate among countries at a similar income level. Generally, it is believed that faster population growth is associated with higher income inequality. One of the reasons for this is that the dependency burden may be higher for the poorer group.

One of the most important factors underlying income inequality is the level of access to education. There is a two-way link here; on the one hand an unequal educational opportunity leads to greater inequality in income distribution by widening the skilled and productivity gaps in the working population, while on the other, unequal income distribution tends to prevent the poor investing in education and acquiring skills.

Trade liberalization by its nature implies adjustment and so is likely to have distributional impacts. As far as trade liberalization is concerned, its effect on income distribution can go either way in the sense that it may worsen or alleviate the distribution of income in developing countries. A number of studies have attempted to relate trade policy variables to economic growth (Dollar, 1992; Sachs and Warner, 1995; Edwards, 1992). These studies found that trade openness is associated with more rapid growth.

Having discussed inequality factors, we now provide a brief discussion on poverty predictors. One of the most widely promoted hypothesis in the social sciences is that economic growth reduces poverty. While growth without distribution is not merely a theoretical possibility, but is being experienced in certain countries or regions, most

researchers consider that the widespread poverty in developing countries results from slow economic accumulation. The notion of a "trickle down" effect proposes a downwards-spread of the benefits of economic growth, although this growth sequencing does not indicate the time lag that the poor must wait after the rich get richer first (see, for example, Ravallion, 1995, 1997).

There is a theoretical consensus that rapid population growth aggravates poverty. Rapid population growth necessarily redistributes the population structure in favour of the young and increases the size of families in the poor stratum, thus increasing poverty (Deaton and Paxon, 1997). This Malthusian process is more likely to affect developing countries, where a combination of poor agricultural economies, limited human capital and rudimentary technology mean that the increment of population does not translate to increasing labour forces and consequently upgrading income levels. (Becker, Glaeser and Murphy, 1999).

3. Methodology

In this section we introduce a methodological frame work for inequality and poverty. Following the conventional wisdom in the literature on inequality, the Kuznets curve has been modelled (see, for example, Randolph and Lot, 1993; Ram, 1995) using the following kind of regression equation:

3.1: Inequality Model

$$\log Gini_{it} = \alpha_{it} + \gamma_1 \log Y_{it} + \gamma_2 \log Y^2_{it} + \varepsilon_{it}, \quad (i = 1, \ldots\ldots N; t = 1, \ldots\ldots T), \qquad \text{(I)}$$

where $\log Gini_{it}$ is the natural logarithm of the Gini Index, $\log Y_{it}$ is the natural logarithm of income per capita, adjusted using PPP weights, $\log Y^2_{it}$ controls for nonlinear conditional convergence across countries and ε_{it} is a disturbance term. The expected signs for γ_1 and γ_2 in equation (1) are positive and negative, respectively. As we have seen, cross country inequality variation depends on other factors such as government size, education and population growth and therefore equation (1) should be modified accordingly. For example, higher targeted government spending could reduce inequalities

given that rent seeking activities are avoided and government spending enhances the possibilities and opportunities for the poor. A rise in human capital, HK, can be expected to narrow the gap between poor and rich as people with high investment in HK are less likely to fall into poverty. Additionally, taking on board these extra variables, equation (I) can be rewritten as:

$$\log Gini_{it} = \alpha_{it} + \gamma_1 \log Y_{it} + \gamma_2 \log Y^2_{it} + \gamma_3 \log G_{it} + \gamma_4 \log HK_{it} + \gamma_5 \Delta Pop_{it} + \varepsilon_{it} \quad \text{(II)}$$

where G_{it} is the natural log of government spending, as a proxy for government spending on the social sector, $HK_{it,}$is measured as the secondary school enrolment rate, ΔPop_{it} is the percentage change in total population, and ε_{it} is a disturbance term We also propose estimating a variant of (II) which, following the suggestions of Barro (2000) and Aisbett (2005), includes globalization variables:

$$\log Gini_{it} = \alpha_{it} + \gamma_1 \log Y_{it} + \gamma_2 \log Y^2_{it} + \gamma_3 \log G_{it} + \gamma_4 \log HK_{it} + \gamma_5 \Delta Pop_{it} + \gamma_6 [Trade_{it} / Y] + \gamma_7 [FDI_{it} / Y] + \varepsilon_{it} \quad \text{(III)}$$

where Trade and FDI denote and respectively. According to the Stolper-Samuelson theorem the expected sign for γ_6 depends on the comparative advantage of an economy relative to its trading partners. Similarly, the expected sign, γ_7, could be either positive or negative.

3.2: Poverty Model

In order to build a poverty model this study follow a basic poverty-growth model suggested by Ravallion (1997), Ravallion and Chen (1997). In the first step, we estimate the elasticity of poverty with respect to economic growth for developing countries in separate regressions. In the next step we introduce measures for inequality and the level of economic development in order to estimate their effects on existing poverty incidence. Due to data constraints we measure the incidence of poverty using the headcount index,

defined as the population living below one dollar a day per capita (PPP adjusted), which is a standard measure used in literature). The relationship for growth-poverty elasticity can be written as

$$\log P_{it} = \alpha_{it} + \beta_1 g + \varepsilon_{it}$$
$$(i = 1,..... N ; t = 1,..... T), \quad (1)$$

where P_{it} indicates poverty in country i at time t and g_{it} measures the annual growth rate. The coefficient β_1 measures elasticity of poverty with respect to growth given by *g,* and *e* is an error term. An estimated value of β_1 gives the average growth elasticity of poverty in developing countries. However, this average measure could be misleading because β_1 differs across countries and over time depending upon other poverty determinants that explain poverty variation. For example, Bourguignon (2003) points out the importance of income distribution and the initial level of development as additional controls of poverty. The modified version of equation (1) that includes an inequality elasticity of poverty and economic development can be written as:

$$\log P_{it} = \alpha_{it} + \beta_1 g + \beta_2 \log(ineq) + \beta_3 (X_{it}) + \varepsilon_{it}, \quad (2)$$

where P_{it} refers to the natural logarithm of the head count ratio, g_{it} is the annual growth rate of GDP between two survey years, $Ineq_{it}$ is the natural logarithm of the gini index X_{it} is a vector of control variables for poverty other than economic growth and income distribution. In addition to the initial distribution of income and the level of economic development, poverty results from complex economic and social processes. For these reasons we extend this model to include other factors. Recent studies suggest that households with better profiles of human capital are less prone to poverty incidence as compared to those with a lower acquisition of human capital. In this study we proxy human capital with the average year of schooling. Finally, we include measures of globalization in our model. Conventionally, in the literature two measures of globalization are used, namely trade and capital flows. Winter et al. (2004) finds that

trade liberalization reduces poverty in the long run, while Carneiro and Arbache (2003) do not find a significant affect of openness to trade on inequality and poverty using CGE model.

$$\log P_{it} = \alpha_{it} + \beta_1 g + \beta_2 \log(ineq) + \beta_3 (X_{it}) + \beta_4 (Trade/Y) + \beta_5 (FDI/Y) + \varepsilon_{it} \quad (3)$$

where $trade_{it}$ is the ratio of exports plus imports to GDP and FDI_{it} is the ratio of FDI inflow to GD.

4. Data and Estimation Procedure

In this study we measure income inequality using the Gini coefficient, which is one of the most popular representations of income inequality. It is based on the Lorenz Curve, which plots the share of population against the share of income received and has a minimum value of 0 (the case of perfect equality) and a maximum value of 1 (perfect inequality). The Income inequality variable is unlikely to be comparable across countries due to differences in definitions and methodologies. Missing values in Income inequality data are the major problem in cross country analysis since many of the developing countries have only one or two observations. Therefore, we expanded the existing database by including comparable data on inequality from recent household surveys contained in World Bank, UNDP, and IMF Staff reports.

To make the data more comparable across countries we take data on variables in the form of averages between two survey years. For example, per capita real GDP growth rates are annual averages between two survey years. We then construct a panel data set for 65 developing countries for the period 1970-2008 have been assembled with the data averaged over periods of three to seven years (which is the minimum and maximum gap between two survey years), depending on the availability of the inequality data. The minimum number of observations for each country is three and the maximum seven. That is, only countries with observations for at least three consecutive periods are included. In order to conduct a comparative analysis developing countries have been split into two groups: countries with high financial intermediation and those with low financial intermediation. The countries above the median value of HFI are ranked as HFI countries.

To measure trade liberalization, we sum exports and imports and then divide this term by gross domestic product. Data on imports and exports are the annual averages between two survey years. Data on exports and imports are derived from the IFS database. Population growth rates are taken from the World Bank development reports. The secondary school enrolment is at the beginning of the period and derived from the World Bank database. Data on the ratio of government expenditure and investment as shares of GDP are averages for the period between two survey years and come from the IFS.

Figure 1 shows that Kuznets curve holds in developing countries. The relationship between economic development and income inequalities is non-monotonic which implies that initially both variables move in the same direction and after reaching a certain threshold level of the economic development, where trickle down effects begin, income inequalities tend to fall in response to higher level of the economic development. Figure 2 has been drawn to view the relationship between income inequalities and economic development only in the HFI economies. This set of countries provides a clear existence of non-monotonic relationship between the income inequalities and the economic development. However, Figure 3 which captures the same relationship in the LFI economies does not provide a solid picture of the Kuznets curve. Though, in this sample the Kuznets curve holds but comparatively the Kuznets curve is stronger for the HFI countries, which may imply that financial sector liberalization could be a way for a country to attain the threshold level of economic development sooner than in the absence of such liberalisation, with the consequent spillover effects to the poorest segment of the society.

Tables 3 and 4 provide descriptive statistics for the HFI and the LFI economies, respectively. The major facts from the descriptive statistics are as follows. First, economic growth, PCY, human capital, government spending are, on average, higher in the HFI economies while income inequality, poverty and inflations are higher in the LFI economies. This simple finding from descriptive statistics implies that economic indicators in the HFI economies are better as compared to the LFI countries. Second, a noticeable difference has been observed for poverty and inflation describing variables. The inflation in the LFI economies is 30% as compared to 16% in the HFI economies,

almost double. Similarly, the poverty index in the LFI economies is 36% as compared to 20% in the HFI economies. This significant difference for the inflation and the poverty indicators in these two set of countries indicates that the inflation could be a key variable that hits poor people hard. Finally, our key variables of concern, openness to trade and FDI, provide mixed exposure to globalization. In the case of openness to trade, the HFI economies are on average more open to trade while in the case of FDI, the LFI economies receive more FDI.

4.1: Estimation Technique

We now discuss the estimation procedure used for inequality and poverty models. The use of pooled time-series and cross-section data provides a large sample that is expected to yield efficient parameter estimates. Ordinary Least Squares (OLS) does not address the issue of omitted variable bias. If a region, country, or some group specific factors affect inequality and poverty, explanatory variables would capture the effects of these factors and estimates would not represent the true effect of the explanatory variables. Baltagi (2001) proposes fixed effect econometric techniques to estimate panel data, which could avoid the problem of omitted variable bias. However, in the presence of a lagged independent variable this technique gives biased parameter estimates and in this case we use a Two Stage Least Square (2SLS) estimator. This technique addresses the issue of endogeneity and also addresses the problem of omitted variables bias. We also use alternative econometric techniques such as Limited Information Maximum Likelihood (LIML), Generalized Methods of Moments (GMM) and System-GMM.

In this study, we mainly focus on the generalized method of Moments (GMM) estimation technique that has been developed for dynamic panel data analysis. This technique has been introduced by Holtz-Eakin *et al*. (1990), Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1997). GMM controls for endogeneity of all the explanatory variables, allows for the inclusion of lagged dependent variables as regressors and accounts for unobserved country-specific effects. For GMM estimation sufficient instruments are required. Following the standard convention in the literature, the equations are estimated using lagged first differences as instrument.

5. Results and Discussion

The estimation procedure in this study proceeds in the following way. First, parameter estimates are drawn for all selected developing countries and then for sub samples of high financial intermediation (HFI) and low financial intermediation (LFI) countries for comparative purposes. Second, we initially focus on the distributional consequences of globalization and before moving on to the consequences. Third, and following the approach in other studies, we initially present results obtained using OLS econometric methods, before moving on to different econometrics techniques which address the possible problem of endogeneity.

Table 6 presents our results on income distribution for developing countries. Column (2) of the Table indicates that the relationship between income distribution and the level of economic development is non-monotonic implying that at lower levels of economic development income inequalities are high then after reaching a threshold level of high economic development, income inequalities tend to fall. The estimated coefficient for Y_{it} and Y^2_{it} are of the expected signs and highly significant. This relationship is robust to the inclusion of additional controls. The parameter estimates for Y_{it} and Y^2_{it} remain positive and significant in all columns.

Columns (3-6) provide significant evidence of a negative relationship between high financial intermediation and income distribution which means that financial liberalization could bridge the gap between rich and poor by providing private credit facilities. Inflation turns out to be positive and significant, indicating higher inflation rates widen the gap between rich and poor, hurting the poor relatively more. The role of government appears significant in reducing income inequalities.

Table 7 replicates the results of Table 6, using alternative econometric techniques and controlling for the issue of endogeneity. The estimated coefficients for Y_{it} and Y^2_{it} are significant in all columns and of the expected signs. This implies that the relationship between economic development and income inequalities changes over time. The estimated coefficient on the linear term is about 1.9 and -0.11 on the nonlinear (squared) term. Here an argument can be made that economic development leaves behind poorer members of an economy in the short run, but once a threshold level of economic

development is achieved in the long term then the poor also benefit from the development process.

Financial liberalization again appears to be negatively associated with income inequalities and its coefficient is around 0.001. The government seems to play an important role in reducing income inequalities as the estimated coefficients on government spending in all the regressions are significant.

Table 8 provides the results for the benchmark model with the addition of the control variable for openness to trade proxying globalization. The estimated coefficient on openness to trade is insignificant in all regressions, implying that globalization does not play any significant role in impacting on inequalities. Other parameter estimates remain the same in terms of signs and significance, although overall the level of significance is slightly improved when openness to trade is controlled for.

Table 9 reports empirical estimates for the benchmark model including FDI inflows (a measure of globalization), but excluding openness to trade. A simple correlation matrix shows that openness to trade and FDI are positively correlated. The correlation between the two is around 28 % and this may create a problem of multicolinearity. In order to avoid multicolinearity, and to assess the exclusive contribution of both measures of globalization, we examine the influence of these terms individually. The results reveal that the estimated coefficient on FDI is about 0.02 and highly significant in the first 4 columns of Table 9. However, the level of significance drops slightly in the 6^{th} column of the Table but the overall size of the coefficient, the direction of causality and the level of significance all are robust.

The coefficient on inflation turns out to be positive and significant. The magnitude of the estimated value of the coefficient on inflation is a robust 0.002, while the level of significance is 1% in all regressions. In all of our estimations from Table 6 through to Table 9 the standard statistical tests such as F stat, Wald Test, Sargan Test and J stat support the estimated model.

We can draw the following key findings for our group of developing countries. First, the Kuznets curve holds in developing countries and this reinforces the importance of policies that built a threshold level of economic development to pull the poor out of the poverty trap. Second, we find that openness to trade does not play any significant role in

impacting on income inequalities, while FDI exerts a positive influence on existing inequalities and this implies that globalization does not have a favourable impact on income distribution. Third, financial liberalization exerts a negative influence on income distribution while inflation exerts a positive influence. Fourth, government appears to play an important role in reducing income inequalities in developing countries.

Inequality in countries with a high level of financial intermediation.

In Tables 10-12 we present the results for those economies which have a high level of financial intermediation. Table 10 contains the benchmark results without globalization and it is evident from all columns of the Table that benchmark findings that we reported for all developing countries are not affected in this specific sample of countries. However, we find that openness to trade here is statistically insignificant, although it enters with a consistently negative sign. The impact of FDI is insignificant in all regressions, except column (3) of Table 12 where its effect is positive and significant at the 10% level of significance. Overall then globalization does not have a favourable effect for the high financial intermediation countries, as in the developing country sample. However, globalization as represented by openness to trade is significant at the 10% level in two cases, which implies that globalization may have some limited effect for HFI economies.

Inequality in countries with a low level of financial intermediation.

In Tables 13-14 we present the results for low financial intermediation countries. In this sample the Kuznets curve holds but comparatively the Kuznets curve is stronger for the HFI countries, which may imply that financial sector liberalization could be a way for a country to attain the threshold level of economic development sooner than in the absence of such liberalisation, with the consequent spillover effects to the poorest segment of the society. As in the case of the HFI countries, openness to trade is insignificant although less so. The FDI term is insignificant in the LFI economies and the results for government spending and inflation are similar to the HFI economies, although inflation makes a comparatively more significant contribution to inequalities in HFI countries. Overall the results indicate that the degree of openness of a developing country

does not have a favourable effect on poverty and, specifically, it does not contribute favourably to LFI economies in terms of income distribution.

Table 15 provides results for the poverty model for all developing countries. All columns of the table indicate that economic growth is robustly and negatively associated with poverty. It is the key indicator of economic performance of a country that promises multiple opportunities for economic agents, including the poor. Higher income inequalities are positively and significantly associated with poverty incidence. Higher unequal distribution of wealth is good for the rich as it provides them with a wider set of opportunities. For example, a rich family have better access to human and capital investment, while the poor remain poor due to restricted opportunities. The effects of inflation are disproportional and normally hurt the poor. The panel regression results in Table 15 provide robust and positive effects of inflation on poor people. This is interesting to note since the government sector once again appears a major factor in fighting against poverty.

Table 16 provides results for the poverty model for HFI countries. It is interesting to note that both trade and FDI turn out to be negative and significant, implying that strong domestic financial institutions could be a source of enhancing the capacity of an economy to take advantage of a globalizing world. This finding also implies that an economy needs to achieve a certain level of financial depth before it can derive the benefits of globalization and reduce the risks of the globalization. In other words, reforms of domestic financial institutions are important before an economy embarks on globalization.

Table 17 provides results for the poverty model for LFI countries. This sample of countries provides a sharp contrast for our key variables of interest. In the LFI economies, both openness to trade and FDI are bad for the poor, as the estimated coefficients on both openness to trade and FDI are highly significant with positive signs. In addition, the effect of government spending is not robust and it appears that government is not playing a significant role in the LFI economies. This finding suggests that the poor in the LFI economies are more prone to vagaries of globalization. Hence, globalization, in LFI economies, accentuates rather than ameliorates poverty.

6. Conclusion

The purpose of this study has been to assess the consequences of globalization for developing countries in general and comparatively for high financial intermediation (HFI) countries over a long period 1970 to 2008. The study is unique in the way that it disaggregates consequences of globalization for two sets of developing countries and uses more comparable statistics for inequality and poverty. Furthermore, it explicitly controls for high financial intermediation and endogeneity issues.

With reference to the research question posed for developing countries, we summarise the following major findings. First, the Kuznets curve holds in developing countries and this necessitates the importance of policies that build a threshold level of economic development to pick up the poor from poverty traps. Second, openness to trade does not play any significant role in impacting on income inequalities, while FDI exerts a positive influence on existing inequalities that implies globalization does not have a favourable impact on income distribution. Third, financial liberalization exerts a negative influence on income distribution while inflation exerts positive influence. Fourth, government appears to be an important factor in reducing income inequality gaps.

The main findings of the study for the distributional consequences of globalization in HFI countries are: First, the evidence on the existence of the Kuznets curve are relatively strong in HFI countries and this implies financial sector liberalization could be a source of achieving the threshold level of economic development earlier, and this has a beneficial spillover effect for the poorer segment of society. Second, openness to trade is insignificant with a negative sign however compared to the LFI countries level of insignificance is not high. Third, the impact of FDI is significant with a positive sign but this result is not robust. Overall, we do not find that globalization has a favourable effect on distribution in the HFI sample of countries. However, globalization as measured by trade openness to trade is close to the 10% significance level which suggests that globalization may have a favourable effect on openness to trade in HFI economies. Fourth, inflation exerts a positive influence while government appears an important factor in improving income distribution.

In our modelling of the poverty consequences of globalization for the developing world we found the following. First, the estimated coefficient on economic growth is robustly significant with a negative sign that implies economic growth is good for the poor. Second, the role of government is significant in reducing poverty as the estimated coefficient on government expenditures is robustly significant with a negative sign. The effects of inflation are disproportional and normally hurt the poor. The panel regression results provide robust and positive effects of inflation on poor people. It is interesting to note that the government sector once again appears a major factor in the fight against poverty.

In sum, globalization as represented by openness to trade and FDI accentuates rather than ameliorates poverty and amongst domestic factors we find that economic growth is good for the poor while high income inequality hurts poor people and increases their suffering. However, we find that a sharp contrast arises in our comparative analysis of HFI and LFI countries. In the HFI economies both openness to trade and FDI are good for the poor, as the estimated coefficients on both are highly significant with negative signs. In contrast our results show that globalization hurts the poor in LFI countries as the coefficient on both openness to trade and FDI are highly significant, with positive signs.

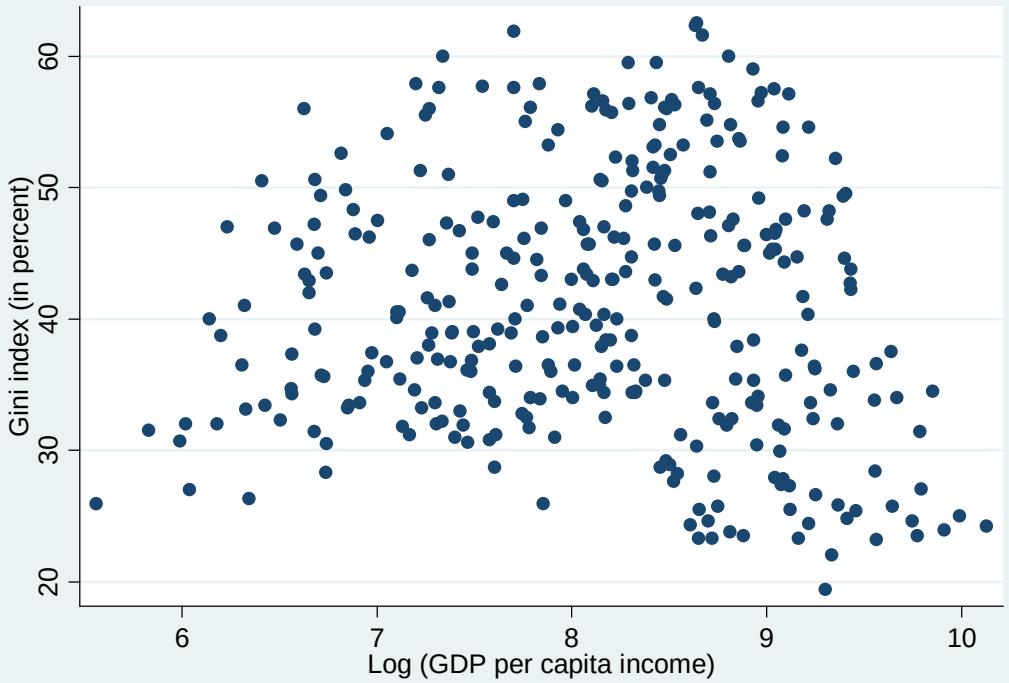

Fig. 1 Inequality and Level of Development in Developing Countries

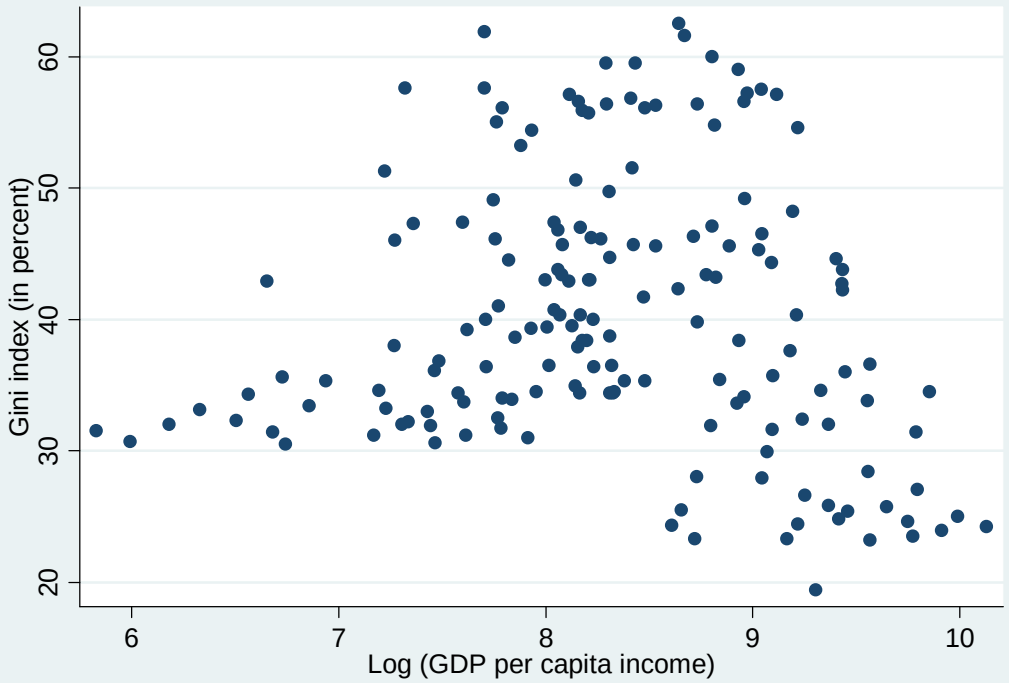

Fig. 2 Inequality and Level of Development in HFI Countries

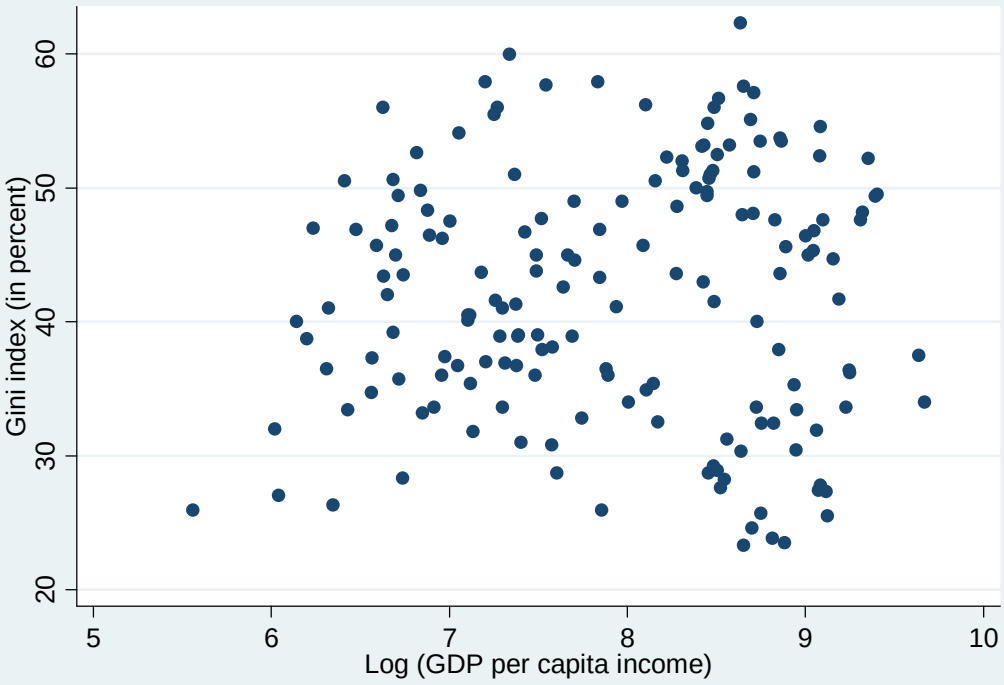

Fig. 3 Inequality and Level of Development in LFI Countries

Table 1: Description of Variables

Variable name	Definitions and Sources
Per capita real GDP	Per capita real GDP growth rates are annual averages between two survey years and are derived from the IMF, WDI and International Financial Statistics (IFS) databases.
Gini coefficient	This is a measure of income inequality based on the Lorenz curve, which plots the share of population against the share of income received and has a minimum value of zero (reflecting perfect equality) and a maximum value of one (reflecting complete inequality). The inequality data (Gini coefficient) are derived from World Bank data, UNDP and the IMF staff reports.
Secondary school enrolment	The secondary school enrolment as % of age group at the beginning of the period. It is used as a proxy of investment in human capital and derived from World Bank database.
Inflation	Inflation rates, annual averages between two survey years, are calculated using the IFS's CPI data.
Credit as % of GDP	Credit as a % of GDP represents claims on the non-financial private sector/GDP and is derived from the 32d line of the IFS.
M2 as % of GDP	This represents Broad money/GDP, and is derived from lines 34 plus 35 of the IFS.
Trade liberalization	This is the sum of exports and imports as a share of real GDP. Data on exports, imports and real GDP are in the form of annual averages between survey years.
HFI	This is the level of Financial Intermediation and is determined by adding M2 as a % of GDP and credit to private sector as % of GDP.
FDI	Is measured as net inflow of foreign direct investment as % of GDP and series have been derived form WDI.
Poverty	Measured as head count ratio and the data has been derived from World Bank.

Table 2: Descriptive Statistics in Developing Countries

Variable	Mean	Std. Dev.	Min	Max
Economic Growth	2.52	3.80	-10.00	13.19
Income Inequality	41.06	9.86	19.40	62.50
Log (Income Inequality)	3.68	0.25	2.97	4.14
Human Capital	60.23	23.42	16.00	105.83
Population	1.46	1.14	-1.00	4.20
Government Spending	21.26	8.98	5.18	56.00
Investment	22.48	6.03	7.00	45.00
Inflation	22.87	38.73	-1.00	310.00
GDP Per Capita	8.12	0.93	5.56	10.13
Poverty	28.01	19.65	0.00	74.00
High Financial Intermediation	64.96	38.55	10.00	250.37
Openness to Trade	71.35	38.70	10.80	228.88
FDI	2.91	5.66	-1.33	81.35

Table 3: Descriptive Statistics in HFI Countries

Variable	Mean	Std. Dev.	Min	Max
Economic Growth	3.08	3.23	-6.80	9.68
Income Inequality	40.19	10.25	19.40	62.50
Log (Income Inequality)	3.66	0.26	2.97	4.14
Human Capital	63.38	21.05	20.00	105.83
Population	1.46	1.05	-1.00	4.20
Government Spending	22.11	9.55	6.29	56.00
Investment	24.56	5.79	12.94	40.78
Inflation	16.40	30.28	0.47	200.00
GDP Per Capita	8.33	0.86	5.83	10.13
Poverty	20.29	14.59	0.00	63.80
High Financial Intermediation	88.98	39.13	26.00	250.37
Openness to Trade	77.23	43.20	13.05	228.88
FDI	2.73	3.44	-1.33	26.83

Table 4: Descriptive Statistics in LFI Countries

Variable	Mean	Std. Dev.	Min	Max
Economic Growth	1.94	4.25	-10.00	13.19
Income Inequality	42.03	9.32	23.30	62.30
Log (Income Inequality)	3.71	0.23	3.15	4.13
Human Capital	56.92	25.33	16.00	101.69
Population	1.46	1.24	-1.00	3.30
Government Spending	20.37	8.29	5.18	45.90
Investment	20.30	5.50	7.00	45.00
Inflation	29.63	45.07	-1.00	310.00
GDP Per Capita	7.91	0.94	5.56	9.67
Poverty	36.17	21.03	1.00	74.00
High Financial Intermediation	40.15	15.20	10.00	83.00
Openness to Trade	64.93	31.87	10.80	172.90
FDI	3.10	7.24	-0.19	81.35

Table 5: Simple Correlation Matrix for Developing Countries

	Gro	Ineq	HK	Pop	G	Inv	Inf	PCY	Pov	HFI	Open	FDI
Growth	1.00											
Inequality	0.01	1.00										
HK	-0.05	-0.16	1.00									
Population	0.14	0.34	-0.66	1.00								
Govt	-0.32	-0.28	0.40	-0.44	1.00							
Investment	0.41	0.08	0.22	-0.08	-0.07	1.00						
Inflation	-0.51	0.13	0.21	-0.32	0.13	-0.19	1.00					
PCY	-0.08	0.14	0.54	-0.40	0.40	0.19	0.07	1.00				
Poverty	-0.14	-0.13	-0.43	0.21	-0.29	-0.31	0.09	-0.72	1.00			
HFI	0.27	0.04	0.17	0.02	0.11	0.57	-0.30	0.36	-0.50	1.00		
Openness	-0.07	0.08	0.22	-0.08	0.23	0.33	-0.14	0.18	-0.13	0.30	1.00	
FDI	-0.02	0.09	0.22	-0.25	0.16	0.13	0.02	0.13	0.06	-0.01	0.37	1.00

Table 6: Inequality in Developing Countries

Independent Variables	Dependent Variable: Income Distribution				
Per Capita GDP	1.38 (6.86)*	1.46 (6.73)*	1.54 (7.24)*	1.40 (6.65)*	1.42 (6.71)*
Per capita GDP squared	-.09 (-6.81)*	-0.085 (-6.30)*	-0.09 (-6.78)*	-0.08 (-6.22)*	-0.081 (-6.24)*
Human Capital		-0.0004 (-0.46)	-0.001 (-1.29)		-0.001 (-1.29)
High Financial Intermediation		-.001 (-2.81)*	-.001 (-2.85)*	-.001 (-1.94)**	-.001 (-1.93)**
Population		0.13 (7.97)*	0.12 (6.54)*	0.12 (9.73)*	0.11 (7.04)*
Government Expenditure			-0.005 (-4.05)*	-0.006 (-4.58)*	-0.006 (-4.72)*
Inflation				0.001 (3.49)*	0.001 (3.44)*
Constant	-1.65 -(2.02)	-2.65 (-2.03)*	-2.79 (-3.28)*	-2.33 (-2.76)*	-2.35 (-2.78)*
F Stat	24.74	29.49 (0.000)	31.14 (0.000)	34.14 (0.000)	29.49 (0.000)
R Square	0.13	0.38	0.42	0.44	0.45

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 7: Inequality in Developing Countries using Alternative Econometric Techniques

Independent Variables	Dependent Variable: Income Distribution					
	2SLS	2SLS	LIML	LIML	GMM	GMM
Per Capita GDP	1.99 (6.83)*	1.87 (6.35)*	1.99 (6.81)*	1.88 (6.35)*	2.02 (6.01)*	1.82 (5.43)*
Per capita GDP squared	-0.114 (-6.42)*	-0.12 (-5.99)*	-0.114 (-6.40)*	-0.11 (-5.98)*	-0.11 (-5.67)*	-0.10 (-5.10)*
Human Capital	-.002 (-1.90)**	-.0001 (-1.30)	-.002 (-1.92)**	-.0001 (-1.27)	-.002 (-2.16)*	-.001 (1.40)
High Financial Intermediation	-.002 (-3.15)*	-.001 (-2.48)*	-.001 (-3.17)*	-.001 (-2.50)*	-.001 (-3.12)*	-.001 (-2.66)*
Population	.111 (5.65)*	.12 (5.93)*	.111 (5.63)*	.12 (5.93)*	0.12 (6.88)*	0.12 (6.86)*
Government Expenditure	-0.007 (-3.13)*	-0.006 (-2.75)*	-0.007 (-3.15)*	-0.006 (-2.73)*	-0.006 (-2.93)	-0.007 (-2.88)
Inflation		0.001 (2.06)**		0.001 (2.05)**		0.001 (2.56)*
Constant	-4.77 (-4.00)*	-4.36 (-3.61)*	-4.77 (-3.99)*	-4.37 (-3.61)*	-4.90 (-3.57)	-4.13 (-3.01)
Wald	144.51 (0.000)	159.55 (0.000)	144.56 (0.000)	159.72 (0.000)	199.67 (0.000)	215.41 (0.000)
Sargan	5.56 (0.06)	4.66 (0.10)	5.71 (0.06)	4.77 (0.10)		
Basmann	5.46 (0.07)	4.53 (0.10)	2.74 (0.07)	2.27(0.10)		
Hansen J					7.12 (0.03)	4.46 (0.10)
R Square	0.40	0.42	0.40	0.42	0.41	0.42
Countries	65	65	65	65	65	65

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 8: Inequality and Globalization (Openness to trade) in Developing Countries

Independent Variables	Dependent Variable: Income Distribution							
	2SLS	2SLS	LIML	LIML	GMM	GMM	System-GMM	Sys-GMM Collapse
Per Capita GDP	1.97 (6.73)*	1.87 (6.34)*	1.97 (6.73)*	1.87 (6.34)*	2.00 (5.98)*	1.83 (5.44)*	1.40 (4.93)*	1.16 (2.90)*
Per capita GDP squared	-0.11 (-6.32)*	-0.106 (-5.97)*	-0.112 (-6.33)*	-0.106 (-5.96)*	-0.11 (-5.63)*	-0.10 (-5.11)*	-0.076 (-4.35)*	-0.058 (-2.36)*
Openness	-0.0003 (-0.80)	-0.0002 (-0.49)	-0.0003 (-0.77)	-0.0002 (-0.47)	-0.0004 (-0.85)	-0.000 (-0.32)	0.000 (0.31)	0.001 (1.44)
High Financial Intermediation	-.001 (-2.70)*	-.001 (-2.26)*	-.001 (-2.72)*	-.001 (-2.29)*	-.001 (-2.56)*	-.001 (-2.36)*	-.001 (-1.22)	-.001 (-1.77)***
Population	.11 (5.60)*	.12 (5.90)*	.11 (5.58)*	.12 (5.90)*	.13 (6.76)*	.12 (6.83)*	.16 (4.75)*	.13 (2.03)*
Inflation		0.001 (1.91)***		0.001 (1.91)***	0.001 (2.33)*	0.001 (2.33)*	0.002 (4.31)*	0.002 (2.00)**
Human Capital	-0.001 (-1.75)***	-0.001 (-1.19)	-0.002 (-1.77)***	-0.001 (-1.19)	-0.002 (-2.01)	-0.001 (-1.37)	-0.003 (-1.60)***	-0.008 (-2.42)*
Government Expenditure	-0.006 (-2.91)*	-0.006 (-2.55)*	-0.006 (-2.92)*	-0.006 (-2.53)*	-0.006 (-2.76)*	-0.006 (-2.75)*	-0.009 (-3.90)*	-0.018 (-5.89)*
Wald	147.59 (0.000)	160.93 (0.000)	147.60 (0.000)	161.06 (0.000)	204.98 (0.000)	218.60 (0.000)	153.56 (0.000)	78.37 (0.000)
Sargan	5.28 (0.07)	4.58 (0.10)	5.41 (0.06)	4.58 (0.10)				
Basmann	5.15 (0.08)	4.43 (0.10)	2.59 (0.08)	4.43 (0.10)				
Hansen J					6.72 (0.04)	4.52 (0.10)	58.06 (1.0)	34.51 (0.39)
AR (2)							(0.33)	(0.88)
Hansen dif							56.63 (0.86)	56.63 (0.50)
R square	0.41	0.43	0.41	0.43	0.41	0.43		
Country	65	65	65	65	65	65	65	65

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero.
The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 9: Inequality and Globalization (FDI) in Developing Countries

Independent Variables	Dependent Variable: Income Distribution						
	2SLS	2SLS	LIML	LIML	GMM	GMM	System-GMM
Per Capita GDP	2.07 (6.81)*	1.94 (6.25)*	2.10 (6.71)*	1.94 (6.22)*	2.12 (6.13)*	1.90 (5.26)*	1.33 (3.60)*
Per capita GDP squared	-0.12 (-6.42)*	-0.11 (-5.92)*	-0.12 (-6.34)*	-0.11 (-5.89)*	-0.12 (-5.76)*	-0.11 (-4.92)*	-0.073 (-3.17)*
FDI	0.018 (2.26)*	0.025 (3.04)*	0.021 (2.36)*	0.025 (3.07)*	0.012 (1.50)	0.022 (2.34)*	0.011 (2.44)*
High Financial Intermediation	-0.001 (-3.03)*	-0.001 (-2.16)*	-0.001 (-3.04)*	-0.001 (-2.16)*	-0.001 (-2.89)	-0.001 (-2.18)	-0.001 (-1.36)
Population	0.12 (5.36)*	0.15 (6.53)*	0.13 (5.77)*	0.15 (6.52)*	0.13 (6.57)*	0.15 (7.06)*	0.18 (5.44)*
Inflation		0.002 (2.67)*		0.002 (2.67)*	0.002 (3.46)*	0.002 (3.46)*	0.002 (4.55)*
Human Capital	-0.002 (-1.75)***	-0.001 (-0.81)	-0.002 (-1.73)***	-0.001 (-0.79)	-0.002 (-1.86)	-0.001 (-0.71)	-0.002 (-0.94)
Government Expenditure	-0.006 (-2.76)	-0.005 (-2.13)	-0.006 (-2.61)	-0.005 (-2.09)	-0.006 (-2.33)**	-0.005 (-1.94)**	-0.009 (-4.13)**
Wald	142.18 (0.000)	156.07 (0.000)	138.04 (0.000)	154.80 (0.000)	192.46 (0.000)	202.75 (0.000)	175.75 (0.000)
Sargan	9.99 (0.01)	1.91 (0.38)	10.32 (0.01)	1.912 (0.38)			
Basman	9.99 (0.01)	1.83 (0.40)	4.93 (0.01)	0.92 (0.40)			
Hansen J					10.72 (0.01)	1.19 (0.55)	1.19 (0.55)
AR (2)							(0.49)
Hansen dif							59.30 (0.79)
R	0.38	0.38	0.36	0.37	0.39	0.39	0.39
Country	65	65	65	65	22	22	22

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero.
The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 10: Inequality in High Financial Intermediation (HFI) Countries using Alternative Econometrics Techniques

Independent Variables	Dependent Variable: Income Distribution			
	2SLS	2SLS	GMM	GMM
Per Capita GDP	3.85 (6.66)*	3.52 (6.25)*	3.42 (5.95)*	1.82 (5.43)*
Per capita GDP squared	-0.22 (-6.47)*	-0.20 (-6.06)*	-0.20 (-5.79)*	-0.10 (-5.10)*
Human Capital	-.003 (-1.85)**	-.002 (-1.46)	-.002 (-1.39)	-.001 (1.40)
HFI	-.001 (-1.60)*	-.0002 (-0.53)*	-.0002 (-0.42)	-.001 (-2.66)*
Population	.084 (2.93)*	.097 (3.38)*	0.092 (3.56)*	0.12 (6.86)*
government expenditure	-0.009 (-2.88)*	-0.006 (-2.75)*	-0.008 (-2.65)	-0.007 (-2.88)
Inflation		0.002 (3.05)**	.002 (4.43)*	0.001 (2.56)*
Constant	-12.75 (-5.27)*	-11.5 (-4.90)*	-11.03 (-4.62)	-4.13 (-3.01)
Wald	90.73 (0.000)	159.55 (0.000)	140.05 (0.000)	215.41 (0.000)
Sargan	2.32 (0.31)	6.96 (0.04)		
Basmann	2.17 (0.34)	6.76 (0.03)		
Hansen J			4.09 (0.12)	4.46 (0.10)
R Square	0.48	0.53	0.53	0.42
Countries	29	29	29	29

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 11: Inequality and Globalization (Openness to trade) in High Financial Intermediation (HFI) Countries

Independent Variables	Dependent Variable: Income Distribution			
	2SLS	2SLS	GMM	GMM
Per Capita GDP	2.67 (7.00)*	2.52 (6.91)*	2.70 (7.90)*	2.54 (7.57)*
Per capita GDP squared	-0.15 (-6.69)*	-0.145 (-6.62)*	-0.16 (-7.60)*	-0.146 (-7.26)*
Openness	-0.0007 (-1.52)	-0.0002 (-0.35)	-0.0007 (-1.54)	-0.0002 (-0.47)
Population	0.082 (3.73)*	.082 (3.97)*	0.082 (3.84)*	.082 (4.00)*
Inflation		0.002 (3.78)*		0.002 (5.91)*
Human Capital	-0.002 (-1.47)	-0.002 (-1.41)	-0.002 (-1.73)***	-0.001 (-1.37)
Government Expenditure	-0.005 (-2.92)*	-0.007 (-3.74)*	-0.005 (-3.00)*	-0.002 (-1.65)*
Wald	110.02 (0.000)	136.78 (0.000)	121.77 (0.000)	236.76 (0.000)
Sargan	0.95 (0.33)	0.72 (0.39)		
Basmann	0.91 (0.34)	0.69 (0.41)		
Hansen J			1.42 (0.23)	1.05 (0.10)
R square	0.45	0.50	0.45	0.50
Country	29	29	29	29

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 12: Inequality and Globalization (FDI) in High Financial Intermediation (HFI) Countries

Independent Variables	Dependent Variable: Income Distribution			
	2SLS	2SLS	GMM	GMM
Per Capita GDP	2.71 (6.83)*	2.53 (6.68)*	2.74 (7.42)*	2.54 (7.11)*
Per capita GDP squared	-0.16 (-6.59)*	-0.15 (-6.45)*	-0.16 (-7.24)*	-0.147 (-6.87)*
FDI	0.008 (0.93)	0.014 (1.61)***	0.007 (0.73)	0.012 (1.31)
Population	0.0825 (3.53)*	.096 (4.15)*	0.084 (3.14)*	.095 (3.62)*
Inflation		0.002 (4.28)*		0.002 (7.14)*
Human Capital	-0.003 (-1.94)***	-0.002 (-1.64)***	-0.003 (-2.19)*	-0.002 (-1.80)***
Government Expenditure	-0.005 (-2.42)*	-0.005 (-3.15)*	-0.005 (-2.59)*	-0.006 (-3.15)*
Wald	103.28 (0.000)	132.49 (0.000)	111.38 (0.000)	207.22 (0.000)
Sargan	0.85 (0.35)	0.58 (0.45)		
Basmann	0.81 (0.37)	0.54 (0.46)		
Hansen J			1018 (0.28)	0.71 (0.39)
R square	0.43	0.49	0.44	0.50
Country	29	29	29	29

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 13: Inequality and Globalization (Openness to trade) in Low Financial Intermediation (LFI) Countries

Independent Variables	Dependent Variable: Income Distribution			
	2SLS	2SLS	GMM	GMM
Per Capita GDP	0.98 (3.45)*	0.90 (3.19)*	0.90 (3.30)*	0.86 (3.15)*
Per capita GDP squared	-0.056 (-3.10)*	-0.050 (-2.84)*	-0.05 (-2.99)*	-0.048 (-2.84)*
Openness	-0.000 (-0.15)	0.000 (0.15)	0.000 (-0.19)	0.000 (0.03)
Population	0.123 (5.14)*	.132 (5.46)*	.13 (4.95*	.13 (5.40)*
Inflation		0.0006 (1.92)***		0.0006 (2.25)**
Human Capital	0.000 (0.49)	0.0007 (0.66)	0.0005 (0.50)	0.0007 (0.66)
Government Expenditure	-0.006 (-3.23)*	-0.007 (-3.65)*	-0.006 (-3.41)*	-0.007 (-3.82)*
Wald	127.27 (0.000)	134.67 (0.000)	165.49 (0.000)	187.36 (0.000)
Sargan	1.89 (0.16)	0.73 (0.39)		
Basmann	1.80 (0.18)	0.68 (0.40)		
Hansen J			1.85 (0.17)	0.86 (0.35)
R square	0.50	0.51	0.50	0.51
Country	36	36	36	36

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 14: Inequality and Globalization (FDI) in Low Financial Intermediation (LFI) Countries

Independent Variables	Dependent Variable: Income Distribution			
	2SLS	2SLS	GMM	GMM
Per Capita GDP	0.80 (2.65)*	0.66 (2.18)**	0.67 (2.32)*	0.58 (1.96)***
Per capita GDP squared	-0.043 (-2.29)*	-0.034 (-1.80)***	-0.035 (-1.94)***	-0.030 (-1.60)***
FDI	0.012 (1.00)	0.016 (1.47)	0.014 (1.14)	0.019 (2.30)
Population	0.13 (5.08)*	0.14 (5.57)*	.14 (5.12)*	.14 (6.23)*
Inflation		0.000 (2.88)*		0.000 (3.58)*
Human Capital	0.000 (0.11)	0.000 (0.31)	0.000 (0.16)	0.000 (0.30)
Government Expenditure	-0.005 (-2.57)*	-0.005 (-2.90)*	-0.004 (-2.66)*	-0.006 (-3.08)*
Wald	112.23 (0.000)	121.83 (0.000)	144.03 (0.000)	167.74 (0.000)
Sargan	6.41 (0.01)	3.28 (0.07)		
Basmann	6.33 (0.01)	3.16 (0.08)		
Hansen J			5.26 (0.02)	3.55 (0.06)
R square	0.48	0.49	0.46	0.45
Country	36	36	36	36

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 15: Poverty and Globalization (Openness to Trade and FDI) in Developing Countries

Independent Variables	Dependent Variable: Poverty			
	2SLS	GMM	2SLS	GMM
Growth	-1.27 (-7.34)*	-1.26 (-6.32)*	-1.40 (-7.01)*	-1.39 (-6.40)*
Inequality	0.51 (3.64)*	0.50 (2.59)*	0.50 (3.13)*	0.53 (2.37)*
Inflation	0.06 (3.76)*	0.06 (3.75)*	0.053 (2.79)*	0.051 (2.37)*
Government Expenditure	-0.13 (-1.76)***	-0.135 (-2.22)**	-.15 (-1.69)***	-0.15 (-1.99)***
Openness	.038 (2.07)*	.038 (2.06)**		
FDI			1.25 (2.89)*	1.14 (2.18)*
Wald	197.46 (0.000)	144.59 (0.000)	158.41 (0.000)	126.53 (0.000)
Sargan	0.37 (0.54)		0.85 (0.65)	
Basman	0.36 (0.55)		0.81 (0.67)	
J		0.40 (0.53)		0.77 (0.68)
R	0.56	0.56	0.45	0.47
Country	65	65	65	65

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 16: Poverty and Globalization (Openness to Trade and FDI) in High Financial Intermediation (HFI) Countries

Independent Variables	Dependent Variable: Poverty			
	2SLS	GMM	2SLS	GMM
Growth	-1.17 (-2.95)*	-1.35 (-2.98)*	-1.12 (-2.73)*	-1.27 (-2.69)*
Inequality	0.65 (1.65)***	0.52 (1.28)*	1.12 (2.64)*	1.002 (2.01)*
Human Capital	0.23 (3.55)*	0.20 (-3.76)*	-0.22 (-3.11)	-0.24 (-2.69)*
Inflation	-0.04 (-1.08)*	-0.05 (-2.99)*	-0.02 (-0.59)*	-0.02 (-1.69)***
Government Expenditure	-0.56 (-3.98)***	-0.61 (-4.33)**	-.56 (-3.64)*	-0.64 (-3.84)*
Openness	-.09 (-2.98)*	.096 (-3.43)**		
FDI			-1.82 (-2.09)*	-1.84 (-2.12)*
Wald	65.67 (0.000)	76.48 (0.000)	57.80 (0.000)	44.86 (0.000)
Sargan	11.68 (0.00)		9.45 (0.00)	
Basman	12.51 (0.00)		9.72 (0.00)	
J		11.96 (0.00)		13.26 (0.00)
R	0.50	0.49	0.48	0.47
Country	29	29	29	29

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 17 Poverty and Globalization (Openness to Trade and FDI) in Low Financial Intermediation (LFI) Countries

Independent Variables	Dependent Variable: Poverty			
	2SLS	GMM	2SLS	GMM
Growth	-1.75 (-5.31)*	-1.63 (-4.25)*	-1.78 (-4.42)*	-1.74 (-4.58)*
Inequality	0.57 (2.85)*	0.58 (2.06)*	0.58 (2.48)*	0.58 (1.76)***
Human Capital	0.09 (1.63)	0.081 (1.34)	0.05 (0.84)	0.067 (1.14)
Inflation	0.028 (1.05)	0.033 (1.20)*	0.02 (0.68)*	0.01 (0.27)
Government Expenditure	-0.35 (-2.02)*	-0.35 (-2.05)**	-.18 (-0.92)	-0.19 (-1.30)
Openness	.098 (2.32)*	0.10 (2.10)**		
FDI			1.30 (2.00)**	1.36 (2.20)*
Wald	132.72 (0.000)	135.23 (0.000)	102.98 (0.000)	135.00 (0.000)
Sargan	1.55 (0.21)		1.16 (1.28)	
Basman	1.41 (0.23)		1.05 (0.31)	
J		2.00 (0.16)		1.86 (0.17)
R	0.64	0.64	0.53	0.52
Country	36	36	36	36

F-statistics and associated p-values are reported for the test of all slope parameters jointly equal to zero. The t-statistics are given in parentheses (*), (**), and (***) indicate statistical significance at 1%, 5% and 10% levels respectively

Table 18: A Comparative Summary of Inequality and Poverty Consequences of Globalization

Countries	**Dependent Variables**			
	Income Inequality		**Poverty**	
	Globalization Measures		**Globalization Measures**	
	Trade Openness	**FDI**	**Trade Openness**	**FDI**
All Developing	(-) & insignificant	(+) & significant	(+) & significant	(+) & significant
HFI Countries	(-) & insignificant	(+) & insignificant	(-) & significant	(-) & significant
LFI Countries	(+) & highly insig.	(+) & sig, not robust	(+) & significant	(+) & significant

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